

WHAT IS CLAIMED IS:

1. A method of operating a premix burner in a gas turbine, comprising the steps of
measuring a gas turbine power output;
introducing a fuel quantity through the burner;
introducing a water quantity into one of the burner or the burner reaction zone;
adjusting the water quantity depending on the gas turbine power output; and
adjusting the water quantity independent of the fuel quantity.
2. A method of operating a premix burner in a gas turbine, comprising the steps of
measuring a gas turbine power output;
introducing a fuel quantity through the burner;
introducing a water quantity into one of the burner or the burner reaction zone;
adjusting the water quantity depending on the gas turbine power output; and
limiting the water quantity to less than 20% of the fuel quantity.
3. The method as claimed in claim 1, further comprising the step of supplying the burner with liquid fuel.
4. The method as claimed in claim 3, further comprising the steps of mixing the water with a liquid fuel prior to supplying the water to the burner; and operating the burner with a water-in-fuel emulsion.
5. The method as claimed in claim 2, further comprising the step of supplying the burner with liquid fuel.

6. The method as claimed in claim 5, further comprising the steps of mixing the water with a liquid fuel prior to supplying the water to the burner; and operating the burner with a water-in-fuel emulsion.

7. The method as claimed in claim 1, further comprising the step of introducing the water quantity through nozzles of the burner.

8. The method as claimed in claim 2, further comprising the step of introducing the water quantity through nozzles of the burner.